



# STIC Search Report

## EIC 2600

**STIC Database Tracking Number: 183758**

**TO: Scott Beliveau  
Location: Knox 6A01  
Art Unit : 2623  
Friday, March 31, 2006**

**Case Serial Number: 09/773263**

**From: Virgil O. Tyler(ASRC)  
Location: EIC 2600  
KNX-8B68  
Phone: 571-272-8536**

**Virgil.Tyler@uspto.gov**

### Search Notes

Dear Examiner Beliveau,

Attached are the search results (from commercial databases) for your case.

Tags mark the patent/articles, which might be of interest. After you review all records including tagged and untagged records, if you wish to order the complete text of any record, please submit request(s) directly to the STIC-EIC 2600 Email Box or hand carry the request to the front desk of the respective EIC.

Please call if you have any questions or suggestions. I have enclosed a Search Results Feedback Form to facilitate further comments or suggestions. Please take a few minutes to share with us your feedback.

Thanks

*Virgil O. Tyler*

Virgil O. Tyler, CLIN Assistant  
Technical Information Specialist  
ASRC Aerospace Corporation  
EIC 2600



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(c) 2006 Pira International

Set	Items	Description
S1	5001078	DIGITAL()INFORMATION()STREAM?? OR AD?? OR ADVERTISEMENT?? - OR COMMERCIAL?? OR PROGRAM??
S2	32615	(MULTI()MEDIA OR IMAG?()DATA OR PICTURE?? OR PHOTO?? OR PH- OTOGRAPH?? OR JPEG OR GIF OR LOGO?? OR ICON?? OR PICOT() (GRAM- ?? OR GRAPH??) OR SYMBOL?? OR BMP OR MOVING()IMAGE?? OR VIDEO- ?? OR VIDEO(3N)DATA OR MOVIE?? OR GRAPHIC?? OR MPEG?) (3N) (SEG- MENT?? OR SEQU
S3	232917	(MANY OR PLURAL? OR SEVERAL OR NUMEROUS OR MULTI OR MULTIP- LE OR TWO OR 2) (3N) (S1 OR S2)
S4	1739	(ENCOD? OR CODE??) (3N)S3
S5	4366	(CONTINUE?? OR CONTINUOUS OR REPEAT??? OR REPETITIVE OR CO- NSECUTIVE) (3N) (FRAME?? OR I()FRAME?? OR S4)
S6	21282	(BEGIN??? OR START??? OR INTIAL OR END??? OR LAST) (3N) (S5 - OR SEGMENT?? OR SEQUENCE??)
S7	653	AU=(KUNKEL, G? OR KUNKEL G? OR PIETTE, S? OR PIETTE S? OR - PERHAM, D? OR PERHAM D?)
S8	897982	VIDEO?? OR VOD OR STB OR SET()TOP()BOX OR SETTOP()BOX OR R- ECEIVER?? OR GRAPHIC?()USER()INTERFACE?? OR GUI OR VIDEO()ON- ( )DEMAND OR STT OR SET()TOP()TERMINAL?? OR (CATV OR SUBSCRIBER OR CABLE) (3N) (BOX OR CONVERTER)
S9	452	(DISTRIBUTION()NETWORK?) (3N) (CABLE OR CATV)

S10 206 S5(3N)(S8 OR S9)  
 S11 0 S10(3N)(BEGIN??? OR START??? OR INTIAL OR END??? OR LAST)  
 S12 0 S10 AND S7  
 S13 2788 S2(3N)(MANY OR PLURAL? OR SEVERAL OR NUMEROUS OR MULTI OR -  
 MULTIPLE OR TWO OR 2)  
 S14 260 S13(3N)(ENCOD? OR CODE??)  
 S15 0 S14(3N)(CONTINUE?? OR CONTINUOUS OR REPEAT??? OR REPETITIVE  
 OR CONSECUTIVE)(3N)(FRAME?? OR I()FRAME??)  
 S16 0 S14(3N)(BEGIN??? OR START??? OR INTIAL OR END??? OR LAST)(-  
 3N)(SEGMENT?? OR SEQUENCE??)  
 S17 148 S14(10N)(S8 OR S9)  
 S18 0 S17 AND S7  
 S19 75 S17 NOT PY>2001  
 S20 37 RD (unique items)  
 S21 0 S20(3N)(AD?? OR ADVERTISEMENT?? OR COMMERCIAL?? OR PROGRAM-  
 ??)

20/3,K/1 (Item 1 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2006 Institution of Electrical Engineers. All rts. reserv.

08230858 INSPEC Abstract Number: B2002-05-6135C-072, C2002-05-5260D-045

**Title: A rate control method with preanalysis for real-time MPEG-2 video coding**

Author(s): Yokoyama, Y.; Nogaki, S.

Author Affiliation: Multimedia Res. Labs., NEC Corp., Kawasaki, Japan

Conference Title: Proceedings 2001 International Conference on Image Processing (Cat. No.01CH37205) Part vol.3 p.514-17 vol.3

Publisher: IEEE, Piscataway, NJ, USA

Publication Date: 2001 Country of Publication: USA 3  
vol.(lxx+1133+1108+1110) pp.

ISBN: 0 7803 6725 1 Material Identity Number: XX-2001-02307

U.S. Copyright Clearance Center Code: 0-7803-6725-1/01/\$10.00

Conference Title: Proceedings 2001 International Conference on Image Processing

Conference Sponsor: IEEE Signal Process. Soc

Conference Date: 7-10 Oct. 2001 Conference Location: Thessaloniki, Greece

Language: English

Subfile: B C

Copyright 2002, IEE

...Abstract: bit allocation is adjusted to satisfy the VBV constraints. The method is evaluated by MPEG-2 video encoding experiments for sequences whose characteristics significantly change, such as scene changes or fade scenes. The experimental results show that the picture quality is improved by the proposed control method. The PSNR is 2 to 3 dB higher than the conventional method without a preanalysis in difficult scene periods. The method is very effective when a certain coding delay is allowed.

20/3,K/2 (Item 2 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2006 Institution of Electrical Engineers. All rts. reserv.

08156159 INSPEC Abstract Number: B2002-02-6135C-153, C2002-02-5260D-112

**Title: Improved estimation of quantizer moderators in MPEG-2 rate control using a novel robust estimate and a family of exponential modulators**

Author(s): Grecos, C.; Jiang, J.

Author Affiliation: Sch. of Comput., Univ. of Glamorgan, UK

Journal: Proceedings of the SPIE - The International Society for Optical Engineering Conference Title: Proc. SPIE - Int. Soc. Opt. Eng. (USA)  
vol.4209 p.210-19

Publisher: SPIE-Int. Soc. Opt. Eng,

Publication Date: 2001 Country of Publication: USA

CODEN: PSISDG ISSN: 0277-786X

SICI: 0277-786X(2001)4209L:210:IEQM;1-2

Material Identity Number: C574-2001-154

U.S. Copyright Clearance Center Code: 0277-786X/01/\$15.00

Conference Title: Multimedia Systems and Applications III

Conference Sponsor: SPIE

Conference Date: 6-8 Nov. 2000 Conference Location: Boston, MA, USA

Language: English

Subfile: B C

Copyright 2002, IEE

Abstract: The rate control phase in MPEG-2 is crucial for the encoding

of **video sequences** for **two** reasons. First, for timely delivery of **video** without buffer overflows or underflows and second for determining indirectly the encoded video quality through moderation of the quantization parameter on a macro-block basis. We propose a novel robust estimate which combines local activity estimates with the average activity of the previously encoded frame for improving the rate distortion performance of MPEG-2. We then propose a family of exponential modulators for reducing the over-normalization effect which occurs when the activity of the macro-block to be encoded is higher than the activity of the previously encoded frame. Extensive experiments show that the proposed low complexity schemes outperform MPEG-2 in terms of PSNR values for the same number of bits produced. We report increases up to 5 dB for the luminance component and up to 3.5 dB and 3 dB for the chrominance components respectively.

**20/3,K/3 (Item 3 from file: 2)**

DIALOG(R)File 2:INSPEC

(c) 2006 Institution of Electrical Engineers. All rts. reserv.

08098867 INSPEC Abstract Number: B2002-01-6135C-028, C2002-01-5260D-020

**Title: Data hiding in MPEG-2 bit stream domain**

Author(s): Caccia, G.; Lancini, R.

Author Affiliation: CEFRIEL, Politecnico di Milano, Italy

Conference Title: EUROCON'2001. International Conference on Trends in Communications. Technical Program, Proceedings (Cat. No.01EX439) Part vol.2 p.363-4 vol.2

Publisher: IEEE, Piscataway, NJ, USA

Publication Date: 2001 Country of Publication: USA 2 vol. lviii+551

pp.

ISBN: 0 7803 6490 2 Material Identity Number: XX-2001-01581

U.S. Copyright Clearance Center Code: 0 7803 6490 2/2001/\$10.00

Conference Title: EUROCON'2001. International Conference on Trends in Communications. Technical Program, Proceedings

Conference Sponsor: IEEE

Conference Date: 4-7 July 2001 Conference Location: Bratislava, Slovakia

Language: English

Subfile: B C

Copyright 2001, IEE

...Abstract: to introduce a method able to embed a certain amount of bits per frame in **MPEG - 2 coded video sequences**, acting directly in the bit-stream domain. These bits could be used for any purpose for which the offered bandwidth could be wide enough.

...Identifiers: **MPEG - 2 coded video sequences**

**20/3,K/4 (Item 4 from file: 2)**

DIALOG(R)File 2:INSPEC

(c) 2006 Institution of Electrical Engineers. All rts. reserv.

07990871 INSPEC Abstract Number: B2001-09-6135C-040, C2001-09-5260D-015

**Title: Digital watermarking applied to MPEG - 2 coded video sequences exploiting space and frequency masking**

Author(s): Arena, S.; Caramma, M.; Lancini, R.

Author Affiliation: CEFRIEL, Milano, Italy

Conference Title: Proceedings 2000 International Conference on Image Processing (Cat. No.00CH37101) Part vol.1 p.438-41 vol.1

Publisher: IEEE, Piscataway, NJ, USA

Publication Date: 2000 Country of Publication: USA 3 vol.(lxviii+1027+957+1000) pp.

ISBN: 0 7803 6297 7      Material Identity Number: XX-1999-03584  
U.S. Copyright Clearance Center Code: 0 7803 6297 7/2000/\$10.00  
Conference Title: Proceedings of 7th IEEE International Conference on Image Processing

Conference Sponsor: IEEE Signal Process. Soc  
Conference Date: 10-13 Sept. 2000      Conference Location: Vancouver, BC, Canada

Language: English

Subfile: B C

Copyright 2001, IEE

**Title: Digital watermarking applied to MPEG - 2 coded video sequences exploiting space and frequency masking**

**Abstract:** This paper presents a watermarking technique for **MPEG - 2 coded video sequences**. We have chosen to work in the bit stream domain in order to simplify the data embedding process in the case in which the original data are already in a compressed form. Thanks to the exploitation of an interleaved encoding technique and of some space and frequency masking considerations, we have been able to reduce the BER of the original algorithm. Some results underlining the improvements we have been able to obtain thanks to our technique are shown.

...Identifiers: **MPEG - 2 coded video sequences**; space masking; frequency masking; bit stream domain; data embedding process; compressed data; interleaved encoding; BER reduction; copyright protection

20/3,K/5      (Item 5 from file: 2)

DIALOG(R)File 2:INSPEC

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07789289      INSPEC Abstract Number: B2001-01-6135C-126, C2001-01-5260D-072

**Title: A new traffic model for MPEG encoded videos in ATM networks**

Author(s): Derong Liu; Sara, E.I.

Author Affiliation: Dept. of Electr. Eng. & Comput. Sci., Illinois Univ., Chicago, IL, USA

Conference Title: Proceedings Ninth International Conference on Computer Communications and Networks (Cat.No.00EX440)      p.258-63

Editor(s): Engbersen, T.; Park, E.K.

Publisher: IEEE, Piscataway, NJ, USA

Publication Date: 2000      Country of Publication: USA      xxii+661 pp.

ISBN: 0 7803 6494 5      Material Identity Number: XX-2000-02515

U.S. Copyright Clearance Center Code: 0 7803 6494 5/2000/\$10.00

Conference Title: Proceedings Ninth International Conference on Computer Communications and Networks

Conference Sponsor: Army Res. Lab.; IBM; Nokia; Telcordia; IEEE Commun. Soc

Conference Date: 16-18 Oct. 2000      Conference Location: Las Vegas, NV, USA

Language: English

Subfile: B C

Copyright 2000, IEE

**Abstract:** This paper presents a new traffic model for **MPEG encoded video sequences**. Two second-order autoregressive (AR) processes are used to model the autocorrelation structure. One AR process is used to generate the mean frame size of the scenes to model the long range dependence and another AR process is used to generate the fluctuations within the scenes to model the short range dependence. The scene length distribution is fitted using a geometric distribution. The first AR process is therefore "stretched" unevenly according to the geometric distribution to generate the mean frame size sequence. The two AR processes are not simply superposed; instead, they are nested with each other. The parameters

of the AR processes are estimated from measurements of empirical video sequences. Simulation results show that the present model captures the autocorrelation structure in the empirical traces for both small and large lags. The MPEG traffic model presented in this paper is used to predict the queueing performance of single and multiplexed MPEG video sequences at an asynchronous transfer mode multiplexer. Comparison study shows that the present model provides accurate prediction for quality of service measures such as cell loss ratio under different traffic loads and various buffer sizes.

20/3,K/6 (Item 6 from file: 2)

DIALOG(R)File 2:INSPEC

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07762434 INSPEC Abstract Number: B2000-12-6135C-193, C2000-12-5260D-094

**Title: Data hiding in the bit stream domain for MPEG - 2 coded video sequences exploiting space and frequency masking**

Author(s): Arena, S.; Caramma, M.; Lancini, R.

Author Affiliation: CEFRIEL, Milan, Italy

Conference Title: 2000 IEEE International Conference on Acoustics, Speech, and Signal Processing. Proceedings (Cat. No.00CH37100) Part vol.4 p.1987-90 vol.4

Publisher: IEEE, Piscataway, NJ, USA

Publication Date: 2000 Country of Publication: USA 6 vol. lxxx+3906 pp.

ISBN: 0 7803 6293 4 Material Identity Number: XX-2000-01777

U.S. Copyright Clearance Center Code: 0 7803 6293 4/2000/\$10.00

Conference Title: Proceedings of 2000 International Conference on Acoustics, Speech and Signal Processing

Conference Sponsor: IEEE; Signal Process. Soc

Conference Date: 5-9 June 2000 Conference Location: Istanbul, Turkey

Language: English

Subfile: B C

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**Title: Data hiding in the bit stream domain for MPEG - 2 coded video sequences exploiting space and frequency masking**

**Abstract:** In this paper a data hiding technique for MPEG - 2 coded video sequences is presented. We have chosen to work in the bit stream domain in order to simplify the data embedding process in the case in which the original data are already in a compressed form. Thanks to the exploitation of an interleaved encoding technique and of some space and frequency masking considerations, we have been able to reduce the BER of the original algorithm. Some results underlining the improvements we have been able to obtain thanks to our technique are shown.

...Identifiers: MPEG - 2 coded video sequences ; frequency masking ; space masking; data embedding process; compressed form; interleaved encoding technique; BER; algorithm

20/3,K/7 (Item 7 from file: 2)

DIALOG(R)File 2:INSPEC

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07709916 INSPEC Abstract Number: B2000-10-6135C-187, C2000-10-5260D-143

**Title: Joint bit-allocation for MPEG encoding of multiple video sequences with minimum quality-variation**

Author(s): Sorial, H.; Lynch, W.E.; Vincent, A.

Author Affiliation: Dept. of Electr. & Comput. Eng., Concordia Univ., Montreal, Que., Canada

Conference Title: 2000 IEEE International Symposium on Circuits and Systems. Emerging Technologies for the 21st Century. Proceedings (IEEE Cat No.00CH36353) Part vol.2 p.9-12 vol.2

Publisher: Presses Polytech. Univ. Romandes, Lausanne, Switzerland

Publication Date: 2000 Country of Publication: Switzerland 5  
vol.(viii+813+768+769+768+760) pp.

ISBN: 0 7803 5482 6 Material Identity Number: XX-2000-01653

U.S. Copyright Clearance Center Code: 0 7803 5482 6/2000/\$10.00

Conference Title: ISCAS 2000 Geneva. 2000 IEEE International Symposium on Circuits and Systems. Emerging Technologies for the 21st Century. Proceedings

Conference Sponsor: IEEE Circuits & Syst. Soc

Conference Date: 28-31 May 2000 Conference Location: Geneva, Switzerland

Language: English

Subfile: B C

Copyright 2000, IEE

**Title: Joint bit-allocation for MPEG encoding of multiple video sequences with minimum quality-variation**

...Abstract: video transmission over a single communication channel. We present a joint bit-allocation for MPEG **encoding of multiple video sequences** with a minimum quality-variation. The proposed method uses a picture-complexity measure based on the actual coding distortion in encoded frames, then allocates accordingly the available bits to explicitly reduce the variation in quality between the sequences. We compare the performance of the proposed method to independent encoding of the sequences at constant bit rates and to encoding with a joint bit-allocation scheme that uses a TM5-like picture-complexity measure. Results show that the proposed bit-allocation method is superior in terms of minimizing the quality variation between the video sequences and within the individual sequences. The method also provides better minimum picture quality than the other encoding schemes mentioned above. Applications of the joint bit-allocation method include multi-program transmission such as video on demand (VOD) services and digital TV broadcasting.

20/3,K/8 (Item 8 from file: 2)

DIALOG(R) File 2:INSPEC

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07645939 INSPEC Abstract Number: B2000-08-6150M-067, C2000-08-5640-058

**Title: Loss-resilient ATM protocol architecture for MPEG-2 video communications**

Author(s): Cuenca, P.; Orozco-Barbosa, L.; Quiles, F.J.; Garrido, A.

Author Affiliation: Dept. de Inf., Univ. de Castilla-La Mancha, Albacete, Spain

Journal: IEEE Journal on Selected Areas in Communications vol.18, no.6  
p.1075-86

Publisher: IEEE,

Publication Date: June 2000 Country of Publication: USA

CODEN: ISACEM ISSN: 0733-8716

SICI: 0733-8716(200006)18:6L:1075:LRPA;1-9

Material Identity Number: D958-2000-007

U.S. Copyright Clearance Center Code: 0733-8716/2000/\$10.00

Language: English

Subfile: B C

Copyright 2000, IEE

...Abstract: In this paper, we study the impact of cell losses on the quality of an **MPEG - 2 video sequence encoded** in a variable bit

rate mode. We introduce a set of control mechanisms at different levels of the protocol architecture to be used in MPEG-2-based video communications systems using ATM networks as their underlying transmission mechanism. Our results (using different video sequences) show the effectiveness to improve the video quality by using a structured set of control mechanisms to overcome for the loss of cells carrying VBR MPEG-2 video streams. We argue that in order to be able to create video systems able to cope with cell losses encountered in computer communications systems, a structured set of error-resilient protocol mechanisms is needed.

20/3,K/9 (Item 9 from file: 2)

DIALOG(R)File 2:INSPEC

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07522001 INSPEC Abstract Number: B2000-04-6210P-005, C2000-04-5260B-404

**Title: Dynamic bit rate conversion in multipoint video transcoding**

Author(s): Tzong-Der Wu; Jenq-Neng Hwang

Author Affiliation: Dept. of Electr. Eng., Washington Univ., Seattle, WA, USA

Conference Title: Proceedings 1999 International Conference on Image Processing (Cat. 99CH36348) Part vol.3 p.817-21 vol.3

Publisher: IEEE, Piscataway, NJ, USA

Publication Date: 1999 Country of Publication: USA 4 vol.(lxxix+676+977+952+449) pp.

ISBN: 0 7803 5467 2 Material Identity Number: XX-2000-00003

U.S. Copyright Clearance Center Code: 0 7803 5467 2/99/\$10.00

Conference Title: Proceedings of 6th International Conference on Image Processing (ICIP'99)

Conference Sponsor: IEEE Signal Process. Soc.; IEICE

Conference Date: 24-28 Oct. 1999 Conference Location: Kobe, Japan

Language: English

Subfile: B C

Copyright 2000, IEE

...Abstract: re-allocation for video combining in a Multipoint Control Unit (MCU). To combine the pre-encoded multiple video sequences into a single sequence, the total bit-rate may overwhelm the outgoing channel bandwidth. Instead of multiplexing, we apply the transcoding approach to control the bit-rate and reallocate the bits in order to improve the pictures quality. To speed up the operation, a video transcoder usually reuses the decoded motion vectors to reencode the video sequences. Those decoded motion vectors also serve as a good indication of the picture activities. In this paper we uniformly distribute the bit-rate to the combined sequence and then use the motion information and the Lagrange optimization method to reallocate the bits to each sub-picture. The simulation results show that the PSNR distribution of the sub-sequence is more uniform and the video qualities of the active subsequences are much improved.

20/3,K/10 (Item 10 from file: 2)

DIALOG(R)File 2:INSPEC

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07497844 INSPEC Abstract Number: B2000-03-6135C-123, C2000-03-5260D-082

**Title: Joint rate control for MPEG-2 encoding of multiple video sequences**

Author(s): Ismaeil, I.; Kossentini, F.; Ward, R.

Author Affiliation: Dept. of Electr. & Comput. Eng., British Columbia Univ., Vancouver, BC, Canada

Conference Title: Engineering Solutions for the Next Millennium. 1999  
IEEE Canadian Conference on Electrical and Computer Engineering (Cat.  
No.99TH8411) Part vol.2 p.847-50 vol.2

Editor(s): Meng, M.

Publisher: IEEE, Piscataway, NJ, USA

Publication Date: 1999 Country of Publication: USA 3 vol.  
(xxiii+1758) pp.

ISBN: 0 7803 5579 2 Material Identity Number: XX-1999-02873

U.S. Copyright Clearance Center Code: 0 7803 5579 2/99/\$10.00

Conference Title: Engineering Solutions for the Next Millennium. 1999  
IEEE Canadian Conference on Electrical and Computer Engineering

Conference Date: 9-12 May 1999 Conference Location: Edmonton, Alta.,  
Canada

Language: English

Subfile: B C

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**Title: Joint rate control for MPEG- 2 encoding of multiple video sequences**

**Abstract:** This paper presents a joint rate control mechanism for MPEG- 2 **encoding of multiple video sequences** . Our method does not require pre-processing of the **video** signals prior to encoding. The joint rate control is implemented at the frame level, requiring the encoders to communicate amongst each other only once per frame. Experimental results show that our joint rate control yields better performance than other existing methods. The results also show that our joint rate control coding improves the picture quality of the complex video sequences by assigning them more bits, and maintains a good balance in picture quality among the sequences.

20/3,K/11 (Item 11 from file: 2)

DIALOG(R)File 2:INSPEC

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07474753 INSPEC Abstract Number: B2000-02-6135C-126

**Title: Time-varying image quality: modeling the relation between instantaneous and overall quality**

Author(s): Hamburg, R.; De Ridder, H.

Author Affiliation: Oce-Technol. BV, Venlo, Netherlands

Journal: SMPTE Journal vol.108, no.11 p.802-11

Publisher: Soc. Motion Picture & Telev. Eng,

Publication Date: Nov. 1999 Country of Publication: USA

CODEN: SMPJDF ISSN: 0036-1682

SICI: 0036-1682(199911)108:11L:802:TVIQ;1-B

Material Identity Number: S218-1999-011

Language: English

Subfile: B

Copyright 2000, IEE

...Abstract: described that evaluated a model linking instantaneously perceived quality to overall quality judgements of long **video** sequences. Subjects evaluated a 3-min **MPEG - 2 video coded sequence** by means of a continuous assessment procedure. Additionally, they rated overall quality of segments of 10, 30, 60 and 180 seconds of the same video material. The model describing the relation between the instantaneous and overall quality ratings contains two main ingredients, viz. an exponentially decaying weighting function, simulating the the experimentally established recall advantage for the most recently presented material (called the recency effect), and a non-linear averaging procedure

stressing the relative importance of strong impairments. The fit of the model to the experimental data resulted in a decaying time constant of 26 seconds and a power of 3 for the nonlinear weighting. These findings suggest that subjects rely predominantly on the worst events of a sequence when determining their overall quality judgement.

...Identifiers: **MPEG - 2 video coded sequence** ; continuous assessment procedure; exponentially decaying weighting function; non-linear averaging procedure; decaying time constant

**20/3,K/12 (Item 12 from file: 2)**

DIALOG(R)File 2:INSPEC

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07456201 INSPEC Abstract Number: B2000-02-6135C-038

**Title: Two-pass MPEG-2 variable-bit-rate encoding**

Author(s): Westerink, P.H.; Rajagopalan, R.; Gonzales, C.A.

Author Affiliation: IBM Thomas J. Watson Res. Center, Yorktown Heights, NY, USA

Journal: IBM Journal of Research and Development vol.43, no.4 p. 471-88

Publisher: IBM,

Publication Date: July 1999 Country of Publication: USA

CODEN: IBMJAE ISSN: 0018-8646

SICI: 0018-8646(199907)43:4L.471:PMVR;1-H

Material Identity Number: I057-1999-004

U.S. Copyright Clearance Center Code: 0018-8646/99/\$5.00

Language: English

Subfile: B

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...Abstract: bit-rate (VBR) output stream. In that case, it is possible to let the MPEG-2 **encoder** produce a **video sequence** with a constant visual quality over time. This is in contrast to constant-bit-rate (CBR) systems, where the rate is constant but the visual quality varies with the coding difficulty. This paper describes a two-pass encoding system that has as its objective to produce an optimized VBR data stream in a second pass. In a first pass, the video sequence is encoded with CBR, while statistics concerning coding complexity are gathered. Next, the first-pass data is processed to prepare the control parameters for the second pass, which performs the actual VBR compression. In this off-line processing stage, we determine the target number of bits for each picture in the sequence, such that we realize the VBR objective. This means that the available bits are appropriately distributed over the different video segments such that constant visual quality is obtained. Finally, the encoding is performed again, but now under control of the processed first-pass data. During the running of this second pass, a run-time bit-production control mechanism monitors the accuracy and validity of the first-pass data, correcting errors in prediction and observing the buffer boundaries.

**20/3,K/13 (Item 13 from file: 2)**

DIALOG(R)File 2:INSPEC

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07452096 INSPEC Abstract Number: B2000-02-6135C-026, C2000-02-5260D-013

**Title: A study on camera work detection from MPEG-2 encoded data**

Author(s): Yang, Y.; Nakano, S.; Dosho, M.

Author Affiliation: Toyama Prefectural Univ., Japan

Conference Title: Joint Conference on Intelligent Systems 1999 (JCIS'98)

Part vol.4 p.246-9 vol.4

Publisher: Assoc. for Intell. Machinery, USA  
Publication Date: 1998 Country of Publication: USA 4 vol. 1921 pp.  
ISBN: 0 9643456 7 6 Material Identity Number: XX-1999-02893  
Conference Title: Proceedings of 6th International Conference on Fuzzy  
Theory and Technology  
Conference Sponsor: Assoc. for Intell. Machinery; Machine Intell. & Fuzzy  
Logic Lab.; Elsevier Publishing Co.; Inf. Sci. Journal; US Army Res. Office  
; Lab. for Intell. & Nonlinear Control; Duke Univ  
Conference Date: 23-28 Oct. 1998 Conference Location: Research  
Triangle Park, NC, USA  
Language: English  
Subfile: B C  
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Abstract: This paper proposes a new method for directly detecting camera  
work from **MPEG - 2 video encoded data**. To handle **video sequences**  
more easily, structured **video** is proposed, and the types of camera work  
and scene change are used to index the video contents in the structured  
video. According to the characteristics of MPEG-2 compression standards,  
the encoded video data is analyzed using the proposed method which is based  
on motion vectors. The major camera operations, including panning, tilting  
and zooming can be detected from MPEG-2 encoded video data, and high  
detection rates above 80% are achieved. Experimental results confirm the  
effectiveness of the method.

20/3,K/14 (Item 14 from file: 2)  
DIALOG(R)File 2:INSPEC  
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07429631 INSPEC Abstract Number: B2000-01-6150M-050, C2000-01-5640-041  
**Title: Error resilient protocol architecture for the MPEG-2 video  
transmission over ATM networks**  
Author(s): Cuenca, P.; Garrido, A.; Quiles, F.; Orozco-Barbosa, L.  
Author Affiliation: Dept. de Inf., Univ. de Castilla-La Mancha, Albacete,  
Spain  
Conference Title: 1999 2nd International Conference on ATM. ICATM'99  
(Cat. No.99EX284) p.492-501  
Publisher: IEEE, Piscataway, NJ, USA  
Publication Date: 1999 Country of Publication: USA xi+520 pp.  
ISBN: 0 7803 5428 1 Material Identity Number: XX-1999-00459  
U.S. Copyright Clearance Center Code: 0 7803 5428 1/99/\$110.00  
Conference Title: Proceedings of ICATM'99 - 2nd International Conference  
on ATM  
Conference Date: 21-23 June 1999 Conference Location: Colmar, France  
Language: English  
Subfile: B C  
Copyright 1999, IEE

...Abstract: In this paper, we study the impact of cell losses on the  
quality of a **MPEG - 2 video sequence encoded** in a variable bit rate  
mode. We introduce a set of control mechanisms at different levels of the  
protocol architecture to be used in MPEG-2-based video communications  
systems using ATM networks as their underlying transmission mechanism. We  
argue that in order to be able to create video systems able to cope with  
cell losses encountered in computer communications systems, a structured  
set of error-resilient protocol mechanisms is needed. Our results (using  
different video sequences) show the effectiveness in improving the video  
quality by using a structured set of control mechanisms to overcome the  
loss of cells carrying VBR MPEG-2 video streams.

20/3,K/15 (Item 15 from file: 2)

DIALOG(R)File 2:INSPEC

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07222920 INSPEC Abstract Number: B1999-05-6150M-047, C1999-05-5640-036

**Title: An efficient protocol architecture for error-resilient MPEG-2 video communications over ATM networks**

Author(s): Cuenca, P.; Garrido, A.; Quiles, F.; Orozco-Barbosa, L.

Author Affiliation: Dept. de Inf., Univ. de Castilla-La Mancha, Albacete, Spain

Journal: IEEE Transactions on Broadcasting vol.45, no.1 p.129-40

Publisher: IEEE,

Publication Date: March 1999 Country of Publication: USA

CODEN: IETBAC ISSN: 0018-9316

SICI: 0018-9316(199903)45:1L.129:EPAE;1-O

Material Identity Number: I033-1999-001

U.S. Copyright Clearance Center Code: 0018-9316/99/\$10.00

Language: English

Subfile: B C

Copyright 1999, IEE

...Abstract: In this paper, we study the impact of cell losses on the quality of a **MPEG - 2 video sequence encoded** in a variable bit rate mode. We introduce a set of control mechanisms at different levels of the protocol architecture to be used in MPEG-2-based video communications systems using ATM networks as their underlying transmission mechanism. Our results (using different video sequences) show the effectiveness to improve the video quality by using a structured set of control mechanisms to overcome for the loss of cells carrying VBR MPEG-2 video streams. We argue that in order to be able to create video systems able to cope with cell losses encountered in computer communications systems, a structured set of error-resilient protocol mechanisms is needed.

20/3,K/16 (Item 16 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2006 Institution of Electrical Engineers. All rts. reserv.

06890765 INSPEC Abstract Number: B9805-6140C-707

**Title: VBR MPEG-2 encoded video over broadband networks**

Author(s): Zahir, S.S.; Alnuweiri, H.

Author Affiliation: Dept. of Electr. & Comput. Eng., British Columbia Univ., Vancouver, BC, Canada

Journal: Proceedings of the SPIE - The International Society for Optical Engineering Conference Title: Proc. SPIE - Int. Soc. Opt. Eng. (USA) vol.3231 p.372-81

Publisher: SPIE-Int. Soc. Opt. Eng,

Publication Date: 1997 Country of Publication: USA

CODEN: PSISDG ISSN: 0277-786X

SICI: 0277-786X(1997)3231L.372:MEVO;1-I

Material Identity Number: C574-97296

U.S. Copyright Clearance Center Code: 0277-786X/97/\$10.00

Conference Title: Performance and Control of Network Systems

Conference Sponsor: SPIE

Conference Date: 3-5 Nov. 1997 Conference Location: Dallas, TX, USA

Language: English

Subfile: B

Copyright 1998, IEE

...Abstract: impact of a selected set of the QoS parameters on a number of VBR MPEG- 2 **encoded video** clips on each **segment** of such

internetworking. The QoS parameters used in our simulation include cell transmission delay, cell...

... systems. Objective and subjective results of our simulation show that the impact of the satellite **segment** on the **MPEG - 2 encoded video** quality is comparable to that of the fiber optics system and to that generated from the VBR MPEG-2 video encoding/decoding process.

**20/3,K/17 (Item 17 from file: 2)**

DIALOG(R)File 2:INSPEC

(c) 2006 Institution of Electrical Engineers. All rts. reserv.

06881221 INSPEC Abstract Number: B9805-6140C-250, C9805-5260B-147

**Title: Embedding of digital watermarks in video sequences encoded to standard MPEG - 2**

Author(s): Hartung, F.; Girod, B.

Author Affiliation: Lehrstuhl fur Nachrichtentech., Erlangen-Nurnberg Univ., Germany

Journal: ITG-Fachberichte Conference Title: ITG-Fachber. (Germany)

no.144 p.257-62

Publisher: VDE-Verlag,

Publication Date: 1997 Country of Publication: Germany

CODEN: ITGFY ISSN: 0341-0196

SICI: 0341-0196(1997)144L:257:EDWV;1-Z

Material Identity Number: M523-97005

Conference Title: Multimedia: Anwendungen, Technologie, Systeme (Multimedia: Application, Technology, System)

Conference Date: 29 Sept.-1 Oct. 1997 Conference Location: Dortmund, Germany

Language: German

Subfile: B C

Copyright 1998, IEE

**Title: Embedding of digital watermarks in video sequences encoded to standard MPEG - 2**

**20/3,K/18 (Item 18 from file: 2)**

DIALOG(R)File 2:INSPEC

(c) 2006 Institution of Electrical Engineers. All rts. reserv.

06738934 INSPEC Abstract Number: B9712-6140C-266, C9712-5260B-187

**Title: An error concealment scheme for MPEG - 2 coded video sequences**

Author(s): Tsekeridou, S.; Pitas, I.; Le Buhan, C.

Author Affiliation: Dept. of Inf., Aristotelian Univ. of Thessaloniki, Greece

Conference Title: Proceedings of 1997 IEEE International Symposium on Circuits and Systems. Circuits and Systems in the Information Age. ISCAS '97 (Cat. No.97CH35987) Part vol.2 p.1289-92 vol.2

Publisher: IEEE, New York, NY, USA

Publication Date: 1997 Country of Publication: USA 4 vol. lxvi+2832 pp.

ISBN: 0 7803 3583 X Material Identity Number: XX97-01988

U.S. Copyright Clearance Center Code: 0 7803 3583 X/97/\$10.00

Conference Title: Proceedings of 1997 IEEE International Symposium on Circuits and Systems. Circuits and Systems in the Information Age ISCAS '97

Conference Date: 9-12 June 1997 Conference Location: Hong Kong

Language: English

Subfile: B C

Copyright 1997, IEE

**Title: An error concealment scheme for MPEG - 2 coded video sequences**

**Abstract:** The problem of errors occurring in **MPEG - 2 coded video sequences**, caused by signal loss during transmission, is examined in this paper and an attempt is made to reconstruct the lost parts at each frame. The proposed error concealment scheme exploits reconstructed temporal information from previously decoded frames in order to conceal bitstream errors in all types of frames: I, P, or B, as long as temporal information is available. Since no such information is available for the first frame (I-frame) of an MPEG-2 coded sequence, another concealment technique is added to the proposed scheme, which uses spatial information from neighbouring macroblocks (MBs). The simulation results compared with other methods prove to be better judging from both PSNR values and the perceived visual quality of the reconstructed sequence. Its quality ameliorates with time.

...Identifiers: **MPEG - 2 coded video sequences**; signal loss; image reconstruction; reconstructed temporal information; bitstream errors; spatial information; neighbouring macroblocks; PSNR values; perceived visual quality

**20/3,K/19 (Item 19 from file: 2)**

DIALOG(R)File 2:INSPEC

(c) 2006 Institution of Electrical Engineers. All rts. reserv.

06667214 INSPEC Abstract Number: B9710-6140C-026, C9710-5260B-012

**Title: Optimal bit allocation for coding of video signals over ATM networks**

Author(s): Jiann-Jone Chen; Lin, D.W.

Author Affiliation: Dept. of Electron. Eng., Nat. Chiao Tung Univ., Hsinchu, Taiwan

Journal: IEEE Journal on Selected Areas in Communications vol.15, no.6 p.1002-15

Publisher: IEEE,

Publication Date: Aug. 1997 Country of Publication: USA

CODEN: ISACEM ISSN: 0733-8716

SICI: 0733-8716(199708)15:6L:1002:OACV;1-I

Material Identity Number: D958-97006

U.S. Copyright Clearance Center Code: 0733-8716/97/\$10.00

Language: English

Subfile: B C

Copyright 1997, IEE

**Abstract:** We consider optimal **encoding of video sequences** for ATM networks. **Two** cases are investigated. In one, the **video** units are coded independently (e.g., motion JPEG), while in the other, the coding quality of a later picture may depend on that of an earlier picture (e.g., H.26x and MPEGx). The aggregate distortion-rate relationship for the latter case exhibits a tree structure, and its solution commands a higher degree of complexity than the former. For independent coding, we develop an algorithm which employs multiple Lagrange multipliers to find the constrained bit allocation. This algorithm is optimal up to a convex-hull approximation of the distortion-rate relations in the case of CBR (constant bit-rate) transmission. It is suboptimal in the case of VBR (variable bit-rate) transmission by the use of a suboptimal transmission rate control mechanism for simplicity. For dependent coding, the Lagrange-multiplier approach becomes rather unwieldy, and a constrained tree search method is used. The solution is optimal for both CBR and VBR transmission if the full constrained tree is searched. Simulation results are presented which confirm the superiority in coding quality of the encoding algorithms. We

also compare the coded video quality and other characteristics of VBR and CBR transmission.

**20/3,K/20 (Item 20 from file: 2)**

DIALOG(R)File 2:INSPEC

(c) 2006 Institution of Electrical Engineers. All rts. reserv.

06377551 INSPEC Abstract Number: B9611-6140C-010

**Title: Segment processing of MPEG - 2 encoded video sequences**

Author(s): Hedtke, R.; Schnoll, M.

Author Affiliation: Wiesbaden Specialist Coll., Germany

Journal: Fernseh- und Kino-Technik vol.50, no.7 p.367-73

Publisher: Huthig,

Publication Date: July 1996 Country of Publication: West Germany

CODEN: FNKTAH ISSN: 0015-0142

SICI: 0015-0142(199607)50:7L:367:SPME;1-5

Material Identity Number: F033-96007

Language: German

Subfile: B

Copyright 1996, IEE

**Title: Segment processing of MPEG - 2 encoded video sequences**

...Identifiers: **MPEG - 2 encoded video sequences** ; quality requirements; interframe data compression; studio; long groups of pictures

**20/3,K/21 (Item 21 from file: 2)**

DIALOG(R)File 2:INSPEC

(c) 2006 Institution of Electrical Engineers. All rts. reserv.

06140871 INSPEC Abstract Number: B9602-6140C-017, C9602-5260B-012

**Title: A data-parallel approach for real-time MPEG-2 video encoding**

Author(s): Akramullah, S.M.; Ahmad, I.; Liou, M.L.

Author Affiliation: Dept. of Electr. & Electron. Eng., Hong Kong Univ. of Sci. & Technol., Kowloon, Hong Kong

Journal: Journal of Parallel and Distributed Computing vol.30, no.2 p.129-46

Publication Date: 1 Nov. 1995 Country of Publication: USA

CODEN: JPD CER ISSN: 0743-7315

U.S. Copyright Clearance Center Code: 0743-7315/95/\$12.00

Language: English

Subfile: B C

Copyright 1995, IEE

...Abstract: parallelism within each frame, unlike some of the previous approaches that employ multiple processing of **several** disjoint **video sequences**. This makes our **encoder** suitable for real-time applications where the complete **video** sequence may not be present on the disk and may become available on a frame-by-frame basis with time. The Express parallel programming environment is employed as the underlying message-passing system making our encoder portable across a wide range of parallel and distributed architectures. The encoder also provides control over various parameters such as the number of processors in each dimension, the size of the motion search window, buffer management, and bitrate. Moreover, it has the flexibility to allow the inclusion of fast and new algorithms for different stages of the codec into the program, replacing current algorithms. Comparisons of execution times, speedups, and frame encoding rates using different numbers of processors are provided. An analysis of frame data distribution among multiple processors is also presented. In

addition, our study reveals the degrees of parallelism and bottlenecks in the various computational modules of the MPEG-2 algorithm. We have used two motion estimation techniques and five different video sequences for our experiments. Using maximum parallelism by dividing one block per processor, an encoding rate higher than 30 frames/s has been achieved.

**20/3,K/22 (Item 22 from file: 2)**

DIALOG(R)File 2:INSPEC

(c) 2006 Institution of Electrical Engineers. All rts. reserv.

06101972 INSPEC Abstract Number: B9512-6140C-487, C9512-5260B-342

**Title: A segmentation based scheme for very low bit-rate video coding**

Author(s): Bhaskaran, V.; Li, W.; Kunt, M.

Author Affiliation: Hewlett-Packard Co., Palo Alto, CA, USA

Journal: Proceedings of the SPIE - The International Society for Optical Engineering Conference Title: Proc. SPIE - Int. Soc. Opt. Eng. (USA)  
vol.2419 p.81-9

Publication Date: 1995 Country of Publication: USA

CODEN: PSISDG ISSN: 0277-786X

U.S. Copyright Clearance Center Code: 0 8194 1766 1/95/\$6.00

Conference Title: Digital Video Compression: Algorithms and Technologies  
1995

Conference Sponsor: SPIE; Soc. Imaging Sci. & Technol

Conference Date: 5-11 Feb. 1995 Conference Location: San Jose, CA, USA

Language: English

Subfile: B C

Copyright 1995, IEE

...Abstract: been developed for use at the decoder. In this paper, we present simulation results for **several typical video sequences coded** at 16 kbits/sec and at 32 kbits/sec.

**20/3,K/23 (Item 23 from file: 2)**

DIALOG(R)File 2:INSPEC

(c) 2006 Institution of Electrical Engineers. All rts. reserv.

04408039 INSPEC Abstract Number: B89050963

**Title: Eye movements and coding of video sequences**

Author(s): Girod, B.

Author Affiliation: MIT Media Lab., Cambridge, MA, USA

Journal: Proceedings of the SPIE - The International Society for Optical Engineering vol.1001, pt.1 p.398-405

Publication Date: 1988 Country of Publication: USA

CODEN: PSISDG ISSN: 0277-786X

Conference Title: Visual Communications and Image Processing '88

Conference Sponsor: SPIE

Conference Date: 9-11 Nov. 1988 Conference Location: Cambridge, MA, USA

Language: English

Subfile: B

...Abstract: influence of eye movements on the perception of spatiotemporal impairments and their relevance for the **encoding of video sequences** is discussed comprehensively. **Two** simple experiments show that it is neither permissible to generally blur the video signal in moving areas, nor is it justified to introduce more noise in moving areas. Eye movements slant the spatiotemporal frequency response of the HVS. The influence of eye movements on spatial and temporal masking is demonstrated by a computational model of visual perception. Smooth pursuit eye movements

reduce or eliminate temporal masking, but they increase spatial masking effects. A coding system is considered, that utilizes an eye tracker to pick up the point of regard of a single viewer. Such a system has an enormous potential for data compression, but the usefulness of the approach is limited because of the delay introduced by encoding and transmission.

**20/3,K/24 (Item 1 from file: 8)**

DIALOG(R)File 8:EI Compendex(R)

(c) 2006 Elsevier Eng. Info. Inc. All rts. reserv.

06336468 E.I. No: EIP03137413635

**Title: A study on adaptive resolution control for low bit-rate multi-object coding**

Author: Oami, Ryoma; Yamada, Akio; Miyamoto, Yoshihiro

Corporate Source: Comp./Communication Media Research NEC Corporation, Kawasaki, Kanagawa 216-8555, Japan

Conference Title: Proceedings of the 22nd Picture Coding Symposium: PCS-2001

Conference Location: Seoul, South Korea Conference Date: 20010425-20010427

E.I. Conference No.: 60525

Source: 22nd Picture Coding Symposium 2001.

Publication Year: 2001

Language: English

...Abstract: combinations with the same resolution coarseness. The experimental results demonstrate that the proposed method stably **encodes video sequences** containing **multiple** objects at the Rec.601 resolution without serious quality degradation at a bit-rate as low as 2 Mbps, at which appropriate encoding quality could not be otherwise expected. 5 Refs.

**20/3,K/25 (Item 2 from file: 8)**

DIALOG(R)File 8:EI Compendex(R)

(c) 2006 Elsevier Eng. Info. Inc. All rts. reserv.

05970875 E.I. No: EIP01536788828

**Title: H.263-based wireless video transmission in multicode CMDA systems**

Author: Hueda, M.R.; Marques, C.A.

Corporate Source: Lab. de Comunicaciones Digitales Universidad Nacional de Cordoba, Cordoba (5000), Argentina

Conference Title: IEEE 54th Vehicular Technology Conference (VTC FALL 2001)

Conference Location: Atlantic City, NJ, United States Conference Date: 20011007-20011011

E.I. Conference No.: 58835

Source: IEEE Vehicular Technology Conference v 1 n 54ND 2001. p 433-437 (IEEE cat n 01CH37211)

Publication Year: 2001

CODEN: IVTCDZ ISSN: 0740-0551

Language: English

Identifiers: Wireless **video** transmission; Multicode direct **sequence code division multiple** access; Peak signal to noise ratio; **Video** quality

**20/3,K/26 (Item 3 from file: 8)**

DIALOG(R)File 8:Ei Compendex(R)  
(c) 2006 Elsevier Eng. Info. Inc. All rts. reserv.

05854477 E.I. No: EIP01296579994

**Title: Improved estimation of quantizer moderators in MPEG-2 rate control using a novel robust estimate and a family of exponential modulators**

Author: Grecos, J.; Jiang, C.

Corporate Source: School of Computing University of Glamorgan, Wales, United Kingdom

Conference Title: Multimedia Systems and Applications III

Conference Location: Boston, MA, United States Conference Date: 20001106-20001108

E.I. Conference No.: 58235

Source: Proceedings of SPIE - The International Society for Optical Engineering v 4209 2001. p 210-219

Publication Year: 2001

CODEN: PSISDG ISSN: 0277-786X

Language: English

Abstract: The Rate Control phase in MPEG-2 is crucial for the **encoding of video sequences** for **two** reasons. First, for timely delivery of **video** without buffer overflows or underflows and second for determining indirectly the encoded video quality through moderation of the quantization parameter on a macro-block basis. We propose a novel robust estimate which combines local activity estimates with the average activity of the previously encoded frame for improving the rate distortion performance of MPEG-2. We then propose a family of exponential modulators for reducing the "over-normalization" effect which occurs when the activity of the macro-block to be encoded is higher than the activity of the previously encoded frame. Extensive experiments show that the proposed low complexity schemes outperform MPEG-2 in terms of PSNR values for the same number of bits produced. We report increases up to 5 db for the luminance component and up to 3.5 db and 3db for the chrominance components respectively. 8 Refs.

20/3,K/27 (Item 4 from file: 8)

DIALOG(R)File 8:Ei Compendex(R)  
(c) 2006 Elsevier Eng. Info. Inc. All rts. reserv.

05500211 E.I. No: EIP99035079432

**Title: Dynamic bit rate conversion in multipoint video transcoding**

Author: Wu, Tzong-Der; Hwang, Jenq-Neng

Corporate Source: Univ of Washington, Seattle, WA, USA

Conference Title: International Conference on Image Processing (ICIP'99)

Conference Location: Kobe, Jpn Conference Date: 19991024-19991028

E.I. Conference No.: 56432

Source: IEEE International Conference on Image Processing v 3 1999. p 817-821

Publication Year: 1999

CODEN: 85QTAW

Language: English

...Abstract: re-allocation for video combining in a Multipoint Control Unit (MCU). To combine the pre-**encoded multiple video sequences** into a single sequence, the total bit-rate may overwhelm the outgoing channel bandwidth. Instead of multiplexing, we apply the transcoding approach to control the bit-rate and reallocate the bits in order to improve the pictures quality. To speed up the operation, a video transcoder usually reuses the decoded motion vectors to reencode the video sequences. Those decoded motion vectors also serve as a good indication of the picture

activities. In this paper, we uniformly distribute the bit-rate to the combined sequence and then use the motion information and the Lagrange optimization method to reallocate the bits to each sub-picture. The simulation results show that the PSNR distribution of the sub-sequence is more uniform and the video qualities of the active sub-sequences are much improved. (Author abstract) 8 Refs.

20/3,K/28 (Item 5 from file: 8)

DIALOG(R)File 8:Ei Compendex(R)

(c) 2006 Elsevier Eng. Info. Inc. All rts. reserv.

04956605 E.I. No: EIP97083800245

**Title: Optimal bit allocation for coding of video signals over ATM networks**

Author: Chen, Jiann-Jone; Lin, David W.

Corporate Source: Natl Chiao Tung Univ, Hsinchu, Taiwan

Source: IEEE Journal on Selected Areas in Communications v 15 n 6 Aug 1997. p 1002-1015

Publication Year: 1997

CODEN: ISACEM ISSN: 0733-8716

Language: English

Abstract: We consider optimal **encoding of video sequences** for ATM networks. **Two** cases are investigated. In one, the **video** units are coded independently (e.g., motion JPEG), while in the other, the coding quality of a later picture may depend on that of an earlier picture (e.g., H.26x and MPEGx). The aggregate distortion-rate relationship for the latter case exhibits a tree structure, and its solution commands a higher degree of complexity than the former. For independent coding, we develop an algorithm which employs multiple Lagrange multipliers to find the constrained bit allocation. This algorithm is optimal up to a convex-hull approximation of the distortion-rate relations in the case of CBR (constant bit-rate) transmission. It is suboptimal in the case of VBR (variable bit-rate) transmission by the use of a suboptimal transmission rate control mechanism for simplicity. For dependent coding, the Lagrange-multiplier approach becomes rather unwieldy, and a constrained tree search method is used. The solution is optimal for both CBR and VBR transmission if the full constrained tree is searched. Simulation results are presented which confirm the superiority in coding quality of the encoding algorithms. We also compare the coded video quality and other characteristics of VBR and CBR transmission. (Author abstract) 18 Refs.

20/3,K/29 (Item 6 from file: 8)

DIALOG(R)File 8:Ei Compendex(R)

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04455315 E.I. No: EIP96073248591

**Title: Multistage interference cancellation in multirate DS/CDMA on a mobile radio channel**

Author: Johansson, Ann-Louise; Svensson, Arne

Corporate Source: Chalmers Univ of Technology, Gothenburg, Sweden

Conference Title: Proceedings of the 1996 IEEE 46th Vehicular Technology Conference. Part 2 (of 3)

Conference Location: Atlanta, GA, USA Conference Date: 19960428-19960501

E.I. Conference No.: 44992

Source: IEEE Vehicular Technology Conference v 2 1996. IEEE, Piscataway, NJ, USA, 96CB35894. p 666-670

Publication Year: 1996

CODEN: IVTCDZ ISSN: 0740-0551  
Language: English

Identifiers: Interference cancellation; Quadrature amplitude modulation;  
Pilot **symbols** ; Rake **receiver** ; Direct **sequence code** division  
**multiple** access systems; Channel parameters; Channel estimation

**20/3,K/30 (Item 1 from file: 35)**  
DIALOG(R)File 35:Dissertation Abs Online  
(c) 2006 ProQuest Info&Learning. All rts. reserv.

01624702 ORDER NO: AADMQ-24133  
**FRACTAL CODING OF DISPLACED FRAME DIFFERENCE SIGNALS**  
Author: FERRARIO, NINO  
Degree: M.A.SC.  
Year: 1997  
Corporate Source/Institution: SIMON FRASER UNIVERSITY (CANADA) (0791)  
Source: VOLUME 36/03 of MASTERS ABSTRACTS.  
PAGE 826. 122 PAGES  
ISBN: 0-612-24133-5

...orthogonal basis IFS coders are compared to that of a reference  
discrete cosine transform (DCT) **coder** for **two** standard **video**  
**sequences** .

The simulation results indicate that affine-transform-based fractal  
coders are feasible for direct fractal coding of displaced frame difference  
signals. The peak signal-to-noise ratio (PSNR) performance of these coders  
was as good or better than the reference DCT-based coder for the two  
sequences tested. The OBIFS coders, however, are not feasible for direct  
fractal coding of displaced frame difference signals. The reference  
DCT-based coder provided much better performance for all sequences tested.

**20/3,K/31 (Item 1 from file: 65)**  
DIALOG(R)File 65:Inside Conferences  
(c) 2006 BLDSC all rts. reserv. All rts. reserv.

02434524 INSIDE CONFERENCE ITEM ID: CN025436648  
**Investigation of subjective and objective picture quality for MPEG - 2**  
**coded video sequences**  
Schertz, A.; Ravel, M.; Lubin, J.  
CONFERENCE: Fernseh-und Kinotechnische Gesellschaft-Jahrestagung; 18  
JAHRESTAGUNG-FKTG, 1998; VOL 18; NUMBER COM P: 528-543  
FKTG, 1998  
LANGUAGE: German DOCUMENT TYPE: Conference Papers  
CONFERENCE SPONSOR: Fernseh-und Kinotechnische Gesellschaft  
CONFERENCE LOCATION: Erfurt, Germany  
CONFERENCE DATE: May 1998 (199805) (199805)

**Investigation of subjective and objective picture quality for MPEG - 2**  
**coded video sequences**

**20/3,K/32 (Item 1 from file: 95)**  
DIALOG(R)File 95:TEME-Technology & Management  
(c) 2006 FIZ TECHNIK. All rts. reserv.

01020773 E96096555062  
**Approaches to wireless transmission of low bit rate video**

(Verfahren zur drahtlosen Videouebertragung mit niedriger Bit-Rate)  
Mermelstein, P; Khansari, M  
INRS Telecommunications, Verdun, CDN  
Wireless Technol. and Services for Cellular and Personal Communication  
Services, Philadelphia, USA, Oct 25-26, 19951996  
Document type: Conference paper Language: English  
Record type: Abstract

...DESCRIPTORS: COMMUNICATION ENGINEERING; ERROR CORRECTION; VIDEO  
SIGNALS; IMAGE SEQUENCES ; CODE DIVISION MULTIPLE ACCESS; CODE  
DIVISION MULTIPLEXING

20/3,K/33 (Item 2 from file: 95)  
DIALOG(R)File 95:TEME-Technology & Management  
(c) 2006 FIZ TECHNIK. All rts. reserv.

01013363 E96070981317  
**Schnittbearbeitung von MPEG-2-codierten Videosequenzen**  
(Editing of MPEG - 2 coded video - sequences )  
Hedtke, R; Schnoell, M  
FH Wiesbaden, D  
Fernseh- und Kinotechnik, v50, n7, pp367-373, 1996  
Document type: journal article Language: German  
Record type: Abstract  
ISSN: 1430-9947

(Editing of MPEG - 2 coded video - sequences )

20/3,K/34 (Item 3 from file: 95)  
DIALOG(R)File 95:TEME-Technology & Management  
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00924490 E95090944233  
**Proposed UPC meeting both packet video and network goals**  
(Die vorgeschlagene Parameterkontrolle beinhaltet beides Paket-Video- und  
Netzwerk-Ziele)  
Tye, BJ; Dagiuklas, A; Ghanbari, M  
Univ. of Essex, Colchester, GB  
IEE Proceedings - Communications, v142, n4, pp227-232, 1995  
Document type: journal article Language: English  
Record type: Abstract  
ISSN: 1350-2425

ABSTRACT:  
...both peak bit rate (PBR) and mean bit rate (MBR) of an H.261 type video  
codec . Several video sequences with diverse traffic  
characteristics have been used to evaluate their quality of service (QOS)  
under the proposed UPC.

20/3,K/35 (Item 4 from file: 95)  
DIALOG(R)File 95:TEME-Technology & Management  
(c) 2006 FIZ TECHNIK. All rts. reserv.

00755443 I93115488320  
**Statistical characterization and block-based modeling of motion-adaptive  
coded video**  
(Statistische Charakterisierung und blockbasierende Modellierung der

bewegungsadaptiv codierten Videosignale)  
Jabbari, B; Yegenoglu, F; Kou, Y; Zafar, S; Zhang, Y-Q  
Dept. of Electr. Eng., George Mason Univ., Fairfax, VA, USA  
IEEE Transactions on Circuits and Systems for Video Technology, v3, n3,  
pp199-207, 1993  
Document type: journal article Language: English  
Record type: Abstract  
ISSN: 1051-8215

IDENTIFIERS: BLOCK BASED MODELING; MOTION ADAPTIVE CODED VIDEO; FULL MOTION  
VIDEO SOURCES; VARIABLE BIT RATE CODING; **VIDEO** COMPRESSION ALGORITHM;  
MPEG SYNTAX; BIT STREAM DEFINITION; COMPOSITE MODEL; **MULTIPLE**  
AUTOREGRESSIVE MODELS; **VIDEO SEQUENCE** ; CELL GENERATION PROCESS; **VIDEO**  
**CODECS** ; STATISTICAL MULTIPLEXERS; Blockcode; Videosignal

**20/3,K/36 (Item 1 from file: 144)**  
DIALOG(R)File 144:Pascal  
(c) 2006 INIST/CNRS. All rts. reserv.

14774229 PASCAL No.: 00-0453537  
**Joint tracking of region-based and mesh models of 2D VOPs in video sequences**  
**Visual communications and image processing 2000 : Perth, 20-23 June 2000**  
BENOIS-PINEAU J; VERBERT P; BARBA D  
NGAN King N, ed; SIKORA Thomas, ed; MING-TING SUN, ed  
SEI/IVC EP CNRS 2018 EPUN/ University of Nantes, La Chantrerie, rue Ch.  
PAUC, BP 6060, 44306, Nantes, France  
International Society for Optical Engineering, Bellingham WA, United States  
Visual communications and image processing. Conference (Perth AUS)  
2000-06-20  
Journal: SPIE proceedings series, 2000, 4067 (p.1) 1002-1010  
Language: English.

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English Descriptors: Joints; **Encoding** ; **Video techniques** ; Image  
**sequences** ; **Two** dimensional model; Target tracking; Hierarchized  
structure; Mesh method; Triangulation; **Video** signals; Experimental  
study

**20/3,K/37 (Item 2 from file: 144)**  
DIALOG(R)File 144:Pascal  
(c) 2006 INIST/CNRS. All rts. reserv.

14340543 PASCAL No.: 99-0549570  
**Two-pass MPEG-2 variable-bit-rate encoding : Digital multimedia technology**  
WESTERINK P H; RAJAGOPALAN R; GONZALES C A  
IBM Research Division, Thomas J. Watson Research Center, P.O. Box 218,  
Yorktown Heights, New York 10598, United States; Lucent Technologies, 1160  
Route 22E, Room 227B, Bridgewater, New Jersey 08807, United States; IBM  
Thomas J. Watson Research Center, Yorktown Heights, New York 10598, United States  
Journal: IBM journal of research and development, 1999, 43 (4) 471-488  
Language: English

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... bit-rate (VBR) output stream. In that case, it is possible to let the MPEG-2 encoder produce a video sequence with a constant visual quality over time. This is in contrast to constant-bit-rate (CBR) systems, where the rate is constant but the visual quality varies with the coding difficulty. This paper describes a two-pass encoding system that has as its objective to produce an optimized VBR data stream in a second pass. In a first pass, the video sequence is encoded with CBR, while statistics concerning coding complexity are gathered. Next, the first-pass data is processed to prepare the control parameters for the second pass, which performs the actual VBR compression. In this off-line processing stage, we determine the target number of bits for each picture in the sequence, such that we realize the VBR objective. This means that the available bits are appropriately distributed over the different video segments such that constant visual quality is obtained. To be able to quantify the constant visual quality, perceptual experiments are described and a practical model is fitted to them. Exceptional cases such as scene changes and fades are detected and dealt with appropriately. We also ensure that the second-pass compression process does not violate the decoder buffer boundaries. Finally, the encoding is performed again, but now under control of the processed first-pass data. During the running of this second pass, a run-time bit-production control mechanism monitors the accuracy and validity of the first-pass data, correcting errors in prediction and observing the buffer boundaries. Results are compared to CBR operation.

File 344:Chinese Patents Abs Jan 1985-2006/Jan  
(c) 2006 European Patent Office  
File 350:Derwent WPIX 1963-2006/UD,UM &UP=200621  
(c) 2006 Thomson Derwent  
File 371:French Patents 1961-2002/BOPI 200209  
(c) 2002 INPI. All rts. reserv.

Set	Items	Description
S1	854866	DIGITAL() INFORMATION() STREAM?? OR AD?? OR ADVERTISEMENT?? - OR COMMERCIAL?? OR PROGRAM??
S2	7380	(MULTI() MEDIA OR IMAG?() DATA OR PICTURE?? OR PHOTO?? OR PH- OTOGRAPH?? OR JPEG OR GIF OR LOGO?? OR ICON?? OR PICOT() (GRAM- ?? OR GRAPH??) OR SYMBOL?? OR BMP OR MOVING() IMAGE?? OR VIDEO- ?? OR VIDEO(3N) DATA OR MOVIE?? OR GRAPHIC?? OR MPEG?) (3N) (SEG- MENT?? OR SEQU
S3	646	(MANY OR PLURAL? OR SEVERAL OR NUMEROUS OR MULTI OR MULTIP- LE OR TWO OR 2) (3N) S2
S4	72	(ENCOD? OR CODE??) (3N) S3
S5	3346	(CONTINUE?? OR CONTINUOUS OR REPEAT??? OR REPETITIVE OR CO- NSECUTIVE) (3N) (FRAME?? OR I() FRAME??)
S6	67	(BEGIN??? OR START??? OR INTIAL OR END??? OR LAST) (3N) S5
S7	65	AU=(KUNKEL, G? OR KUNKEL G? OR PIETTE, S? OR PIETTE S? OR - PERHAM, D? OR PERHAM D?)
S8	521569	VIDEO?? OR VOD OR STB OR SET() TOP() BOX OR SETTOP() BOX OR R- ECEIVER?? OR GRAPHIC?() USER() INTERFACE?? OR GUI OR VIDEO() ON- ( ) DEMAND OR STT OR SET() TOP() TERMINAL?? OR (CATV OR SUBSCRIBER OR CABLE) (3N) (BOX OR CONVERTER)
S9	212	(DISTRIBUTION() NETWORK?) (3N) (CABLE OR CATV)
S10	0	S4 (3N) S5
S11	0	S4 AND S5
S12	1	S6 (3N) (S8 OR S9)
S13	13	S6 AND (S8 OR S9)
S14	4	S7 AND IC=H04N?
S15	4	S14 NOT S13

12/3,K/1 (Item 1 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2006 Thomson Derwent. All rts. reserv.

008456188 \*\*Image available\*\*  
WPI Acc No: 1990-343188/199046  
XRPX Acc No: N90-262446

**Video system with adaptive inter-frame prediction coding - discards frames to impose upper limit on transmission bit-rate from rapidly moving images**

Patent Assignee: NEC CORP (NIDE )  
Inventor: TANOI T  
Number of Countries: 006 Number of Patents: 009  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 397206	A	19901114	EP 90108951	A	19900511	199046 B
JP 2298184	A	19901210	JP 89117242	A	19890512	199104
CA 2016641	A	19901112				199106
JP 3006184	A	19910111	JP 89139224	A	19890602	199108
US 5121202	A	19920609	US 90522538	A	19900511	199226
EP 397206	A3	19930113	EP 90108951	A	19900511	199346
CA 2016641	C	19950711	CA 2016641	A	19900511	199535
EP 397206	B1	19970730	EP 90108951	A	19900511	199735
DE 69031145	E	19970904	DE 631145	A	19900511	199741
			EP 90108951	A	19900511	

Priority Applications (No Type Date): JP 89139224 A 19890602; JP 89117242 A 19890512

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
EP 397206	A			
				Designated States (Regional): DE GB IT
US 5121202	A	16	H04N-007/12	
EP 397206	B1 E	22	H04N-007/32	
				Designated States (Regional): DE GB IT
DE 69031145	E		H04N-007/32	Based on patent EP 397206
CA 2016641	C		H04N-007/12	

...Abstract (Basic): on transmission rate. In a simple system, transmission rate may be limited by discarding similarly **repeating frames** at transmitting **end**, with restoration at **receiver** by repeatedly displaying a previous frame, which results in motion jerkiness. Two motion vectors and predicted error signal are derived and transmitted through the system.

At the receiver, discarded frame positions are filled with recovered earlier frames, which are motion-compensated if required following a decision of second motion vector validity. The decision circuit calculates absolute values of predicted error signal of frame period following a discarded frame.

ADVANTAGE - Reduced jerkiness. (17pp Dwg.No.1/8)

13/3,K/1 (Item 1 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2006 Thomson Derwent. All rts. reserv.

017264611 \*\*Image available\*\*  
WPI Acc No: 2005-588236/200560

**Camera phone for compensating a hand trembling motion**  
Patent Assignee: MTEK VISION CO LTD (MTEK-N)  
Inventor: SO H Y

Number of Countries: 001 Number of Patents: 001  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
KR 2005023549	A	20050310	KR 200359860	A	20030828	200560 B

Priority Applications (No Type Date): KR 200359860 A 20030828  
Patent Details:  
Patent No Kind Lan Pg Main IPC Filing Notes  
KR 2005023549 A H04N-005/232

Abstract (Basic):

... A camera member(200) captures a **video** image of an object. A memory member(300) stores information on the **video** image captured by the camera member. A display member(500) displays the **video** image. A CPU(Central Processing Unit)(400) transmits information on the **video** image to another communication device by a wireless communication network. An interfacing integrated member(100) receives the **video** image provided by the camera member, produces information on the **video** image, provides the information to the memory member and the CPU and displays the captured **video** image displayed to the display member. The interfacing integrated member compares **video** images of two or more frames continuously transmitted from the camera member, detects a motion vector and shifts the **start** point of the **continued frame** into a predetermined moving value in order to correct the motion vector when the size of the motion vector is within a predetermined threshold boundary.

DwgNo 1/1

13/3,K/2 (Item 2 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2006 Thomson Derwent. All rts. reserv.

015266782 \*\*Image available\*\*  
WPI Acc No: 2003-327711/200331  
XRPX Acc No: N03-261992

**Digital receiver for radio broadcast application, samples digital signal to extract sequence of consecutive bits and count indicative of time of detection of frame start is initiated by cyclic prefix correlator**

Patent Assignee: AGERE SYSTEMS INC (AGER-N)  
Inventor: CUPO R L; KARIM M R; SARRAF M; ZARRABIZADEH M  
Number of Countries: 001 Number of Patents: 001

Patent Family:  
Patent No Kind Date Applicat No Kind Date Week  
US 6501810 B1 20021231 US 98170174 A 19981013 200331 B

Priority Applications (No Type Date): US 98170174 A 19981013  
Patent Details:  
Patent No Kind Lan Pg Main IPC Filing Notes  
US 6501810 B1 11 H04L-007/00

Digital receiver for radio broadcast application, samples digital signal to extract sequence of consecutive bits and count indicative of time of detection of frame start is initiated by cyclic prefix correlator

Abstract (Basic):

... frame start is initiated by a cyclic prefix correlator (402) to detect the time of **frame start** within **consecutive** bit sequence. A synchronizer generates a pointer indicating time of arrival of future frame start, based on the count.

13/3,K/3 (Item 3 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2006 Thomson Derwent. All rts. reserv.

014122487 \*\*Image available\*\*  
WPI Acc No: 2001-606699/200169  
XRPX Acc No: N01-452814

A method of transmitting real-time data for a communication link transmitting non-real-time data includes transmitting non-real-time data to an indicated offset, transmitting a real-time data capsule at the offset, and repeating

Patent Assignee: DATA RACE INC (DATA-N)  
Inventor: OLIVER D C  
Number of Countries: 001 Number of Patents: 001  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6292484	B1	20010918	US 9749182	A	19970611	200169 B
			US 98100778	A	19980610	

Priority Applications (No Type Date): US 9749182 P 19970611; US 98100778 A 19980610

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 6292484	B1	23	H04J-003/24	Provisional application US 9749182

Abstract (Basic):

... fixed length capsule of the real-time data is transmitted at the offset (60) and **repeated** until the **frame ends** (66).  
... c) modems including a transmitter and a **receiver** for real-time data

(d) and computer programs for implementing methods of transmitting and receiving real-time data.

USE - The method of transmitting real-time data is used for a communication link transmitting non-real-time data.

ADVANTAGE - The method allows transmission of real-time data, such as digitized speech, in regular data frames through a modem with minimal impact on performance. Low latency and overhead is achieved and no special hardware is required.

DESCRIPTION OF DRAWING(S) - The figure shows a flow chart of a method of transmitting real-time data.

pp; 23 DwgNo 4/13

13/3,K/4 (Item 4 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2006 Thomson Derwent. All rts. reserv.

013507043 \*\*Image available\*\*  
WPI Acc No: 2000-678987/200066  
XRPX Acc No: N00-502645

Operation emulation method of graphic processor for general purpose computer e.g. video game system, involves skipping execution of other subset of commands to partially render frame, when evaluation is negative

Patent Assignee: CONNECTIX CORP (CONN-N)

Inventor: GILES A S

Number of Countries: 021 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200039693	A1	20000706	WO 99US30853	A	19991228	200066 B
US 6115054	A	20000905	US 98222461	A	19981229	200066
EP 1141850	A1	20011010	EP 99967601	A	19991228	200167
			WO 99US30853	A	19991228	
JP 2002533837	W	20021008	WO 99US30853	A	19991228	200281
			JP 2000591521	A	19991228	

Priority Applications (No Type Date): US 98222461 A 19981229

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200039693 A1 E 48 G06F-015/00

Designated States (National): JP

Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

US 6115054 A G06F-015/00

EP 1141850 A1 E G06F-015/00 Based on patent WO 200039693

Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

JP 2002533837 W 57 G06T-001/00 Based on patent WO 200039693

Operation emulation method of graphic processor for general purpose computer e.g. video game system, involves skipping execution of other subset of commands to partially render frame, when evaluation is negative

Abstract (Basic):

... The ability of general purpose computer to generate video frame fully synchronized with target system is evaluated. All the commands in command cache are fully executed, when the evaluation is positive, to fully render the frame. The subset of commands in the command cache is executed and execution of other subset of commands is skipped to partially render the frame when evaluation is negative.

... partially render a frame represented by commands and stored in VRAM (120), on detection of frame end. Evaluation is repeated each time when frame end is detected. Successive evaluations generate different evaluations so that frames are fully rendered while other...

...For emulating operation of graphics processor in general purpose computer system e.g. video game system...

...Execution of clipped drawing commands occupies great percent of rendering time of average video frame, and by skipping the commands, the frame is rendered quickly minimizing unintended collateral effects on subsequent frames.

DESCRIPTION OF DRAWING(S) - The figure shows the conceptual control flow diagram of operation emulation method of graphic processor.

VRAM (120)

pp; 48 DwgNo 4/11

...Title Terms: VIDEO ; GAME; SYSTEM; SKIP; EXECUTE; SUBSET; COMMAND; RENDER; FRAME; EVALUATE; NEGATIVE

13/3,K/5 (Item 5 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2006 Thomson Derwent. All rts. reserv.

012751057 \*\*Image available\*\*  
WPI Acc No: 1999-557174/199947  
XRPX Acc No: N99-413047

Video signal converter for monitor of e.g. high-resolution TV, computer  
- deletes identical first frames or identical last frames in 6- frame  
sequences, and repeats one frame in each remaining 4-frame sequence

Patent Assignee: FAROUDJA LAB INC (FARO-N)

Inventor: FAROUDJA Y C

Number of Countries: 002 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 11243507	A	19990907	JP 98352925	A	19981211	199947 B
US 6111610	A	20000829	US 97988722	A	19971211	200043
			US 97993547	A	19971218	

Priority Applications (No Type Date): US 97993547 A 19971218; US 97988722 A  
19971211

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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JP 11243507	A		13	H04N-005/253	
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US 6111610	A			H04N-007/01	CIP of application US 97988722
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Video signal converter for monitor of e.g. high-resolution TV, computer

...

...deletes identical first frames or identical last frames in 6- frame  
sequences, and repeats one frame in each remaining 4-frame sequence

...Abstract (Basic): NOVELTY - A line receiving unit receives a video  
signal, reproduced from a film, according to the rate of 60 to 120  
hertz frame. A frame repeater and a displacer output a 120 hertz video  
signal by which a 3-2 pull down pattern is maintained as a 6-4...

...4-sequence frame is repeated. DETAILED DESCRIPTION - An INDEPENDENT  
CLAIM is also included for a video signal conversion...

...DRAWING(S) - The figure shows the timing information diagram for  
explaining the operation of a video signal converter.

Dwg.2/9

Title Terms: VIDEO ; SIGNAL; CONVERTER; MONITOR; HIGH; RESOLUTION;  
TELEVISION; COMPUTER; DELETE; IDENTICAL; FIRST; FRAME; IDENTICAL; LAST;  
FRAME; FRAME; SEQUENCE; REPEAT; ONE; FRAME; REMAINING; FRAME; SEQUENCE

13/3,K/6 (Item 6 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2006 Thomson Derwent. All rts. reserv.

012644700 \*\*Image available\*\*  
WPI Acc No: 1999-450805/199938  
XRPX Acc No: N99-337286

Data transmission system for connecting personal computers to  
communication apparatus for internet access - has switching unit to  
selectively feed data from first-in first-out memory and null data  
generator whose timings are controlled by timing generator corresponding  
to data interruption to be made

Patent Assignee: SHARP KK (SHAF )

Number of Countries: 001 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 11187074	A	19990709	JP 97348326	A	19971217	199938 B
JP 3462061	B2	20031105	JP 97348326	A	19971217	200377

Priority Applications (No Type Date): JP 97348326 A 19971217

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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JP 11187074	A		36	H04L-013/08	
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JP 3462061	B2		37	H04L-013/08	Previous Publ. patent JP 11187074
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...Abstract (Basic): generator receives a null transmitting command to send out null data. Sending of the idle **frame** is **started** and **continued** subsequently for predetermined timing, set at the initiation time. When it is judged with reference...

...is set to M. The null skip command of parameter (N-M) is published. A **receiver** is controlled to interrupt transmission of data to FIFO memory temporarily until the time which requires signal from receiving timing generating unit in order to receive the null data of length (N-M) after the null skip command from CPU, is elapsed. The initiation position is set as the Kth position. Since the length is set to (N), reading of the data from FIFO memory is interrupted at position (K-1). If a null skip command of parameter (N) is published, the null data of length (N) is canceled. A frame check inspection unit is provided to inspect the frame check of the received frame. A detour unit is provided to bypass the frame check inspection unit and write the received data in FIFO memory.

USE - For connection of computer to communication apparatus such as personal handy system (PHS), portable telephone for internet access.

ADVANTAGE - While sending null data, CPU can perform other processes, hence the ability of the load of CPU in communication is lightened. DESCRIPTION OF DRAWING(S) - The figure shows schematic block diagram of communication apparatus.

Dwg.1/26

13/3,K/7 (Item 7 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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010554545 \*\*Image available\*\*

WPI Acc No: 1996-051498/199606

XRPX Acc No: N96-043141

**Selection method for key-frame representing sequence of images in video image - automating temporal segmentation of video sequences into individual camera shots by distinguishing between sharp breaks and gradual transitions implemented by special effects**

Patent Assignee: INST SYSTEMS SCI (SYST-N); UNIV SINGAPORE NAT (UYSI-N);

SMOLIAR S W (SMOL-I); WU J H (WUJH-I); ZHANG H J (ZHAN-I)

Inventor: SMOLIAR S W; WU J H; ZHANG H; ZHANG H J

Number of Countries: 004 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 690413	A2	19960103	EP 95304387	A	19950622	199606 B
EP 690413	A3	19960731	EP 95304387	A	19950622	199639
JP 8237549	A	19960913	JP 95182229	A	19950627	199647
US 5635982	A	19970603	US 94266216	A	19940627	199728

Priority Applications (No Type Date): US 94266216 A 19940627

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 690413	A2	E	18	G06T-007/20	
Designated States (Regional): DE GB					
JP 8237549	A		16	H04N-005/262	
US 5635982	A		21	H04N-005/76	
EP 690413	A3			G06T-007/20	

**Selection method for key-frame representing sequence of images in video image...**

**...automating temporal segmentation of video sequences into individual camera shots by distinguishing between sharp breaks and gradual transitions implemented by special effects**

**...Abstract (Basic): The method for extracting key-frames in a video image involves determining a difference metric or a set of difference metrics having corresp thresholds...**

**...if the difference value (Da) exceeds a predetermined key frame threshold (Td). The process is continued until the end frame is reached, such that key frames for indexing sequences of images are identified and captured...**

**...USE/ADVANTAGE - Automatic video content parser for parsing video shots such that they are represented in native media and retrievable based on visual contents, for video indexing, archiving, editing and production etc. Enables detection of camera shots implemented by sharp break and gradual transitions implemented by special effects e.g dissolve, wipe, fade-in and fade-out.**

Dwg.2/5

**...Title Terms: VIDEO ;**

**13/3,K/8 (Item 8 from file: 350)**

DIALOG(R)File 350:Derwent WPIX

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009426113 \*\*Image available\*\*

WPI Acc No: 1993-119629/199315

Related WPI Acc No: 1990-299965

XRPX Acc No: N93-091316

**Video mixing simulator system with improved audio signal - includes video disc storing outputs of several TV cameras recorded in interleaved format, with 3 sequences of frames with blocks of 20 frames of each sequence being cyclically interleaved**

Patent Assignee: BRITISH BROADCASTING CORP (BRBC )

Inventor: ALLEN F J D; FINNEY A B

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
GB 2260463	A	19930414	GB 904597	A	19900301	199315 B
			GB 9224798	A	19921126	

Priority Applications (No Type Date): GB 894906 A 19890303

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
GB 2260463	A		9	H04N-005/85	Derived from application GB 904597

**Video mixing simulator system with improved audio signal...**

**...includes video disc storing outputs of several TV cameras recorded in interleaved format, with 3 sequences of frames with blocks of 20 frames**

of each sequence being cyclically interleaved

...Abstract (Basic): The interactive **video** mixing simulator system includes a **video** disc having recorded thereon a number of **video** signals in a number of sequences in interleaved format, a **video** disc player for replaying the recorded images such that one of the interleaved sequences is...

...a number of frames from each sequence. The first time or field of each block **repeats** the **last frame** or field of the preceding block in the same sequence.

USE/ADVANTAGE - For laser disc, or CD used in TV control gallery. Reduces noise pulse rate in audio channel to point so that clicks can be adequately disguised.

Dwg.1/2

Title Terms: **VIDEO** ;

13/3,K/9 (Item 9 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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009214512 \*\*Image available\*\*

WPI Acc No: 1992-341932/199242

Related WPI Acc No: 2000-001116

XRPX Acc No: N92-260793

**Data communication appts. with error correction communication function for facsimile - requests retransmission when receive buffers are full and printing requires more than normal flow control timing**

Patent Assignee: CANON KK (CANO )

Inventor: NISHII T

Number of Countries: 007 Number of Patents: 010

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 508659	A2	19921014	EP 92302754	A	19920327	199242 B
JP 4301940	A	19921026	JP 9165829	A	19910329	199249
EP 508659	A3	19930303	EP 92302754	A	19920327	199349
US 5416785	A	19950516	US 92858411	A	19920327	199525
EP 508659	B1	19990922	EP 92302754	A	19920327	199943
			EP 99200251	A	19920327	
DE 69230012	E	19991028	DE 630012	A	19920327	199951
			EP 92302754	A	19920327	
ES 2136073	T3	19991116	EP 92302754	A	19920327	200001
JP 2000349857	A	20001215	JP 9165829	A	19910329	200104
			JP 2000122570	A	19910329	
JP 3155769	B2	20010416	JP 9165829	A	19910329	200124
JP 3428941	B2	20030722	JP 9165829	A	19910329	200350
			JP 2000122570	A	19910329	

Priority Applications (No Type Date): JP 9165829 A 19910329; JP 2000122570 A 19910329

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

EP 508659 A2 E 7 H04L-001/00

Designated States (Regional): DE ES FR GB IT

JP 4301940 A 4 H04L-001/18

EP 508659 A3 H04L-001/00

US 5416785 A 7 G06F-011/14

EP 508659 B1 E H04L-001/00 Related to application EP 99200251

Designated States (Regional): DE ES FR GB IT

DE 69230012	E	H04L-001/00	Based on patent EP 508659
ES 2136073	T3	H04L-001/00	Based on patent EP 508659
JP 2000349857	A	7 H04L-029/08	Div ex application JP 9165829
JP 3155769	B2	4 H04L-029/08	Previous Publ. patent JP 4301940
JP 3428941	B2	5 H04N-001/32	Div ex application JP 9165829
			Previous Publ. patent JP 2000349857

...Abstract (Basic): When the **receiver** decides that the standard delay time will not be sufficient to print the buffer contents, it sends a retransmission request (PPR) for the **last frame**. This process is **repeated** until normal flow control signals (RNR,RR) can be sent.

ADVANTAGE - Allows slow printing unit to extend time it has for printing and hence maintain communication.

Dwg.2/4

**13/3,K/10 (Item 10 from file: 350)**  
DIALOG(R)File 350:Derwent WPIX  
(c) 2006 Thomson Derwent. All rts. reserv.

008456188      **\*\*Image available\*\***  
WPI Acc No: 1990-343188/199046  
XRPX Acc No: N90-262446

**Video system with adaptive inter-frame prediction coding - discards frames to impose upper limit on transmission bit-rate from rapidly moving images**

Patent Assignee: NEC CORP (NIDE )  
Inventor: TANOI T  
Number of Countries: 006    Number of Patents: 009  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 397206	A	19901114	EP 90108951	A	19900511	199046	B
JP 2298184	A	19901210	JP 89117242	A	19890512	199104	
CA 2016641	A	19901112				199106	
JP 3006184	A	19910111	JP 89139224	A	19890602	199108	
US 5121202	A	19920609	US 90522538	A	19900511	199226	
EP 397206	A3	19930113	EP 90108951	A	19900511	199346	
CA 2016641	C	19950711	CA 2016641	A	19900511	199535	
EP 397206	B1	19970730	EP 90108951	A	19900511	199735	
DE 69031145	E	19970904	DE 631145	A	19900511	199741	
			EP 90108951	A	19900511		

Priority Applications (No Type Date): JP 89139224 A 19890602; JP 89117242 A 19890512

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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EP 397206	A				
Designated States (Regional): DE GB IT					

US 5121202	A	16	H04N-007/12
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EP 397206	B1 E	22	H04N-007/32
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Designated States (Regional): DE GB IT

DE 69031145	E	H04N-007/32	Based on patent EP 397206
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CA 2016641	C	H04N-007/12	
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**Video system with adaptive inter-frame prediction coding - discards frames to impose upper limit on transmission bit-rate from rapidly moving images**

...Abstract (Basic): The digital **video** communication system operates in frame transmit or frame discard modes depending on transmission rate.

In a simple system, transmission rate may be limited by discarding similarly **repeating frames** at transmitting **end**, with restoration at **receiver** by repeatedly displaying a previous frame, which results in motion jerkiness. Two motion vectors and...

...At the **receiver**, discarded frame positions are filled with recovered earlier frames, which are motion-compensated if required following a decision of second motion vector validity. The decision circuit calculates absolute values of predicted error signal of frame period following a discarded frame.

ADVANTAGE - Reduced jerkiness. (17pp Dwg.No.1/8)

...Abstract (Equivalent): A digital **video** communications system operating in a frame transmit mode or a frame discard mode depending on...

...predicted error signal and the first and second motion vectors through a transmission medium; a **receiver** (32') for receiving the interframe predicted error signal and the first and second motion vectors through the transmission medium; a decoding circuit (34'-36',60), operable during the frame transmit mode, for summing the received interframe predicted error signal and a delayed frame to produce a sum signal, delaying the sum signal by a frame interval and delaying the delayed sum signal according to the received first motion vector to produce the delayed frame, and a variable delay circuit (38'-61-62) for introducing no delays to the delayed sum signal during the frame transmit mode and introducing a delay to the frame delayed sum signal according to the received second motion vector during the frame discard mode.

Dwg.1/8

...Abstract (Equivalent): At the transmit end of a **video** communications system, a first motion vector is derived from successive frames during a frame transmit...

...the frame discard mode. The predicted error signal and the vectors are transmitted to the **receiver** end of the system. The second motion vector is derived at the transmit end from frames spaced apart by a discarded frame, and at the receive end, original frames are recovered from the predicted error signal as well as from the first and second motion vectors, and the second motion vector is down-scaled and evaluated whether it is valid or not. During frame discard mode, motion compensation is performed on the recovered frame using the down-scaled vector in response to a valid evaluation, but no compensation is performed if invalid evaluation is made. Alternatively, the second motion vector is derived at the transmit end from successive frames using a larger block size than that used in the first motion vector. At the receive end, the first motion vector as well as the error signal are used in recovering original frames. During the frame discard mode, the second vector is simply used for motion compensation. ADVANTAGE - Interframe coding/decoding less liable to jerkiness.

(Dwg.1/8)

Title Terms: **VIDEO**; SYSTEM; ADAPT; INTER; FRAME; PREDICT; CODE; DISCARDED; FRAME; IMPOSE; UPPER; LIMIT; TRANSMISSION; BIT; RATE; RAPID; MOVE; IMAGE

13/3,K/11 (Item 11 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2006 Thomson Derwent. All rts. reserv.

008412964 \*\*Image available\*\*

WPI Acc No: 1990-299965/199040

XRPX Acc No: N90-230729

Video disc for interleaved format recording - records outputs of set of TV cameras using 3 sequences of frames, blocks of 20 frames of each sequence being cyclically interleaved

Patent Assignee: BRITISH BROADCASTING CORP (BRBC )

Inventor: ALLEN F J D; FINNEY A B

Number of Countries: 001 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
GB 2229889	A	19901003	GB 904597	A	19900301	199040 B
GB 2229889	B	19930825	GB 904597	A	19900301	199334
GB 2260463	B	19930825	GB 904597	A	19900301	199334
			GB 9224798	A	19900301	

Priority Applications (No Type Date): GB 894906 A 19890303; GB 904597 A 19900301

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
GB 2260463	B			H04N-005/85	Derived from application GB 904597
GB 2229889	B			H04N-005/85	

Video disc for interleaved format recording - records outputs of set of TV cameras using 3 sequences of frames, blocks of 20 frames of each sequence being cyclically interleaved

...Abstract (Basic): An interactive **video** mixing simulator system uses a **video** -disc on which the outputs of a batch of t.v. cameras are recorded in...

...much easier to mask. The blocks may include an extra frame such that the first **frame** of each block **repeats** the **last frame** of the preceding block in the same sequence, reducing the visible discontinuities on the jump...

...ADVANTAGE - Easy to edit relevant audio with **video** . (12pp Dwg.No.1/2)

...Abstract (Equivalent): An interactive **video** mixing simulator system comprising a videodisc having recorded thereon a plurality of **video** signals in a plurality of sequences in interleaved format, a videodisc player for replaying the recorded images such that one of the interleaved sequences is replayed at a time, and manually operable means for changing the selected sequence being replayed, such as to simulate a cut from one camera to another wherein in normal operation the player reads the frames from one sequence only and jumps over the frames of intervening sequences, and the system includes means, respective to the manually-operable means for changing the selected sequence, which means changes the jump size for one jump so as to read a different one of the sequences, and wherein each jump causes the player to jump over a substantially whole number of intervening frames.

Dwg.1/1

GB 2229889 B

A videodisc having recorded thereon a plurality of sequences of frames with the sequences being interleaved, the interleaving comprising the interleaving of blocks, each of a plurality of frames from each sequence.

Dwg.1/1

Title Terms: **VIDEO** ; DISC; INTERLEAVED; FORMAT; RECORD; RECORD; OUTPUT; SET; TELEVISION; CAMERA; SEQUENCE; FRAME; BLOCK; FRAME; SEQUENCE; CYCLIC; INTERLEAVED

DIALOG(R)File 350:Derwent WPIX  
(c) 2006 Thomson Derwent. All rts. reserv.

002398302

WPI Acc No: 1980-L4775C/198048

**Video tape recorder with forward or reverse slow motion -  
intermittently replays successive frames which are buffered and read out  
several times each**

Patent Assignee: ANONYMOUS (ANON )

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
RD 199020	A	19801110				198048 B

Priority Applications (No Type Date): RD 80199020 A 19801020

**Video tape recorder with forward or reverse slow motion -  
intermittently replays successive frames which are buffered and read out  
several times each**

...Abstract (Basic): Slow motion replay in a **video** tape recorder (10) is  
produced by intermittently moving tape to replay a single frame which

...

...display (46) a number of times dependent on the degree of slowing.

Reading of the **last frame** of a **repeated** series is synchronised  
with the writing into the buffer of the next frame from the recorder.

Title Terms: **VIDEO** ; TAPE; RECORD; FORWARD; REVERSE; SLOW; MOTION;  
INTERMITTENT; REPLAY; SUCCESSION; FRAME; BUFFER; READ; TIME

**13/3,K/13 (Item 13 from file: 350)**

DIALOG(R)File 350:Derwent WPIX  
(c) 2006 Thomson Derwent. All rts. reserv.

002365079

WPI Acc No: 1980-H1539C/198033

**Electro-optical small moment indicator - has optical system and swinging  
mirror for operation independent of thermal expansion errors**

Patent Assignee: LENGD GOSMETR (LEGO-R)

Inventor: BEZRYADIN N A; DMITRIEV D F; SHENFELD A Y A

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
SU 706720	A	19791231				198033 B

Priority Applications (No Type Date): SU 2649567 A 19780721

...Abstract (Basic): top terminates in a torsional compensation knob, the  
bottom is anchored and the mirror is **continued** downwards by a **frame  
ending** in an arester. The frame is the sensitive **receiver** of the  
measured moment.

An inclined optical axis to the side of the suspension contains a  
light diode, condenser, diaphragm for aligning a beam on to the mirror  
from some angle, e.g. 45 deg., above, with corresp. receiving elements'  
along the reflected axis at 45 deg. below.

15/3,K/1 (Item 1 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
(c) 2006 Thomson Derwent. All rts. reserv.

014405540 \*\*Image available\*\*  
WPI Acc No: 2002-226243/200228  
XRPX Acc No: N02-173593

System for transmitting and displaying targeted advertising in TV  
distribution system using results of viewer-completed demographic survey  
Patent Assignee: WORLDGATE SERVICE INC (WORL-N); KUNKEL G K (KUNK-I);  
PERHAM D A (PERH-I); PIETTE S A (PIET-I)  
Inventor: KUNKEL G K ; PERHAM D A ; PIETTE S A  
Number of Countries: 095 Number of Patents: 007  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200158132	A2	20010809	WO 2001US3201	A	20010201	200228 B
AU 200134699	A	20010814	AU 200134699	A	20010201	200228
US 20020056093	A1	20020509	US 2000179736	P	20000202	200235
			US 2000191474	P	20000323	
			US 2001773263	A	20010201	
EP 1262057	A2	20021204	EP 2001906838	A	20010201	200280
			WO 2001US3201	A	20010201	
BR 200108295	A	20030318	BR 20018295	A	20010201	200325
			WO 2001US3201	A	20010201	
CN 1422496	A	20030604	CN 2001807707	A	20010201	200356
MX 2002007553	A1	20030101	WO 2001US3201	A	20010201	200373
			MX 20027553	A	20020802	

Priority Applications (No Type Date): US 2000191474 P 20000323; US  
2000179736 P 20000202; US 2001773263 A 20010201

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200158132	A2	E	20	H04N-000/00	
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA					
CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP					
KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT					
RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW					
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR					
IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW					
AU 200134699	A			H04N-000/00	Based on patent WO 200158132
US 20020056093	A1			H04N-007/25	Provisional application US 2000179736

EP 1262057	A2	E		H04N-001/00	Provisional application US 2000191474
					Based on patent WO 200158132
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT					
LI LT LU LV MC MK NL PT RO SE SI TR					
BR 200108295	A			H04N-007/16	Based on patent WO 200158132
CN 1422496	A			H04N-007/16	
MX 2002007553	A1			H04N-000/00000	Based on patent WO 200158132

... WO 2001US3201  
Inventor: KUNKEL G K ...

... PERHAM D A ...

... PIETTE S A  
International Patent Class (Main): H04N-000/00 ...

... H04N-000/00000 ...

... H04N-001/00 ...

... H04N-007/16 ...

... H04N-007/25

15/3,K/2 (Item 2 from file: 350)  
DIALOG(R) File 350:Derwent WPIX  
(c) 2006 Thomson Derwent. All rts. reserv.

014065555 \*\*Image available\*\*  
WPI Acc No: 2001-549768/200161  
XRPX Acc No: N01-408408

Web pages navigating system for accessing interactive services through television, has guide mapping application to instruct browser application to navigate to object in web pages linked to currently selected object  
Patent Assignee: WORLDGATE SERVICE INC (WORL-N); AUGENBRAUN J E (AUGE-I); BOOTH R L (BOOT-I); FAUSTINE P M (FAUS-I); FLYNN M C (FLYN-I); JESUP R E (JESU-I); KUNKEL G K (KUNK-I); MATHIESEN M (MATH-I); OUTLAW K (OUTL-I); PIETTE S A (PIET-I); WESTERFER R W (WEST-I)  
Inventor: AUGENBRAUN J E; BOOTH R L; FAUSTINE P M; FLYNN M C; JESUP R E; KUNKEL G K; MATHIESEN M; OUTLAW K; PIETTE S A; WESTERFER R W  
Number of Countries: 095 Number of Patents: 006  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200144914	A1	20010621	WO 2000US33266	A	20001215	200161 B
AU 200120719	A	20010625	AU 200120719	A	20001215	200162
US 20020023271	A1	20020221	US 99170791	P	19991215	200221
			US 2000202849	P	20000508	
			US 2000736392	A	20001215	
EP 1247151	A1	20021009	EP 2000984039	A	20001215	200267
			WO 2000US33266	A	20001215	
BR 200016774	A	20021203	BR 200016774	A	20001215	200305
			WO 2000US33266	A	20001215	
MX 2002006053	A1	20021201	WO 2000US33266	A	20001215	200377
			MX 20026053	A	20020617	

Priority Applications (No Type Date): US 2000202849 P 20000508; US 99170791 P 19991215; US 2000736392 A 20001215

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200144914	A1	E	23	G06F-003/00	
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW					
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW					
AU 200120719	A			G06F-003/00	Based on patent WO 200144914
US 20020023271	A1			H04N-007/173	Provisional application US 99170791

EP 1247151	A1	E		G06F-003/00	Provisional application US 2000202849
					Based on patent WO 200144914
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR					
BR 200016774	A			G06F-003/00	Based on patent WO 200144914
MX 2002006053	A1			G06F-003/00	Based on patent WO 200144914

...Inventor: KUNKEL G K ...

... PIETTE S A ; WESTERFER R W  
...International Patent Class (Main): H04N-007/173  
International Patent Class (Additional): H04N-007/10

15/3,K/3 (Item 3 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2006 Thomson Derwent. All rts. reserv.

014037745 \*\*Image available\*\*  
WPI Acc No: 2001-521958/200157  
XRPX Acc No: N01-386850

Internet web pages interactive broadcasting on dedicated downstream  
channels e.g. cable television system  
Patent Assignee: WORLDGATE SERVICE INC (WORL-N); AUGENBRAUN J E (AUGE-I);  
GROSKY A (GROS-I); KUNKEL G K (KUNK-I); PLOTNICK B (PLOT-I); SEDNA PATENT  
SERVICES LLC (SEDN-N)

Inventor: AUGENBRAUN J E; GROSKY A; KUNKEL G K ; PLOTNICK B  
Number of Countries: 095 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200145413	A1	20010621	WO 2000US33267	A	20001215	200157 B
AU 200122558	A	20010625	AU 200122558	A	20001215	200162
US 20020026642	A1	20020228	US 99170792	P	19991215	200220
			US 2000736393	A	20001215	
EP 1262067	A1	20021204	EP 2000986287	A	20001215	200280
			WO 2000US33267	A	20001215	
BR 200016775	A	20021203	BR 200016775	A	20001215	200305
			WO 2000US33267	A	20001215	
MX 2002006054	A1	20021201	WO 2000US33267	A	20001215	200377
			MX 20026054	A	20020617	
US 20050149981	A1	20050707	US 99170792	P	19991215	200547
			US 99170793	P	19991215	
			US 2000736393	A	20001215	
			US 200571426	A	20050303	

Priority Applications (No Type Date): US 99170793 P 19991215; US 99170792 P  
19991215; US 2000736393 A 20001215; US 200571426 A 20050303

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200145413	A1	E	25	H04N-007/173	
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW					
AU 200122558	A			H04N-007/173	Based on patent WO 200145413
US 20020026642	A1			H04N-007/173	Provisional application US 99170792

EP 1262067	A1	E		H04N-007/173	Based on patent WO 200145413
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR					
BR 200016775	A			H04N-007/173	Based on patent WO 200145413
MX 2002006054	A1			H04N-007/173	Based on patent WO 200145413
US 20050149981	A1			G06F-003/00	Provisional application US 99170792

Provisional application US 99170793  
Div ex application US 2000736393

... WO 2000US33267  
...Inventor: KUNKEL G K ; PLOTNICK B  
...International Patent Class (Main): H04N-007/173  
...International Patent Class (Additional): H04N-005/445

15/3,K/4 (Item 4 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
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012448679 \*\*Image available\*\*  
WPI Acc No: 1999-254787/199921  
Related WPI Acc No: 1997-513062; 2004-388079  
XRPX Acc No: N99-189666

Television interface access system using uniform resource locator  
Patent Assignee: WORLDGATE SERVICE INC (WORL-N); WORLDGATE COMMUNICATIONS  
INC (WORL-N)  
Inventor: AUGENBRAUN J E; GROSKY A; KRISBERGH H; KUNKEL G ; LEE J H E;  
KRISBERGH H M

Number of Countries: 079 Number of Patents: 010

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9915968	A1	19990401	WO 98US18492	A	19980917	199921 B
AU 9894739	A	19990412	AU 9894739	A	19980917	199934
US 5961603	A	19991005	US 96630397	A	19960410	199948
			US 97934985	A	19970922	
NO 200001392	A	20000518	WO 98US18492	A	19980917	200035
			NO 20001392	A	20000316	
EP 1019828	A1	20000719	EP 98948098	A	19980917	200036
			WO 98US18492	A	19980917	
CN 1282429	A	20010131	CN 98811421	A	19980917	200131
JP 2001517877	W	20011009	WO 98US18492	A	19980917	200174
			JP 2000513202	A	19980917	
AU 746478	B	20020502	AU 9894739	A	19980917	200238
US 6477579	B1	20021105	US 96630397	A	19960410	200276
			US 97934985	A	19970922	
			US 99386279	A	19990831	
MX 2000002807	A1	20020301	WO 98US18492	A	19980917	200362
			MX 20002807	A	20000320	

Priority Applications (No Type Date): US 97934985 A 19970922; US 96630397 A  
19960410; US 99386279 A 19990831

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
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WO 9915968	A1	E 40	G06F-012/00	
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Designated States (National): AL AM AU AZ BA BB BG BR BY CA CN CU CZ EE  
GE GH GM HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LV MD MG MK MN MW  
MX NO NZ PL RO RU SD SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW  
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU

MC NL PT SE

AU 9894739	A		G06F-012/00	Based on patent WO 9915968
US 5961603	A		G06F-015/16	CIP of application US 96630397

NO 200001392	A		G06F-000/00	
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EP 1019828	A1	E	G06F-012/00	Based on patent WO 9915968
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Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI  
LU MC NL PT SE

CN 1282429	A		G06F-012/00	
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JP 2001517877	W	58	H04N-007/173	Based on patent WO 9915968
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AU 746478	B		G06F-012/00	Previous Publ. patent AU 9894739
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US 6477579	B1		G06F-015/16	Based on patent WO 9915968 CIP of application US 96630397
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MX 2000002807 A1                      G06F-012/00      Cont of application US 97934985  
Based on patent WO 9915968

...Inventor: **KUNKEL G** ; LEE J H E; KRISBERGH H M  
...International Patent Class (Main): **H04N-007/173**